

IN THE CLAIMS:

Claim 1. (presently amended) A method of eliciting a humoral and cell-mediated immune response against a bovine virus comprising, combining at least one bovine viral epitope and at least one heat shock protein to form a purified epitope/heat shock protein complex, and administering an immune system stimulating amount of said purified epitope-heat shock protein complex to an animal.

Claim 2. (original) The method of claim 1 wherein said bovine viral epitope further comprises a supermotif.

Claim 3. (original) The method of claim 1 wherein said bovine viral epitope further comprises an allele specific peptide motif.

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Claim 4. (original) The method of claim 3 wherein said allele specific peptide motif is selected from the group consisting of BoLA-A11, BoLA-A20, BoLA-HD1, BoLA-HD6 and BoLA-HD7.

Claim 5. (original) The method of claim 1, wherein said bovine viral epitope is between 5 and 25 amino acids in length.

Claim 6. (original) The method of claim 1, wherein said bovine viral epitope is between 5 and 15 amino acids in length.

Claim 7. (original) The method of claim 1, wherein said viral epitope is between 8 and 10 amino acids in length.

Claim 8. (original) The method of claim 1 wherein said epitope is from a virus selected from the group consisting of bovine viral diarrhea virus, bovine respiratory syncytial virus, parainfluenza virus III, bovine corona virus, and bovine rota virus.

Claim 9. (original) The method of claim 1 wherein said heat shock protein is selected from the group consisting of HSP 60, HSP 70 and HSP 90 families.

Claim 10. (original) The method of claim 9 wherein said heat shock protein is gp96.

Claim 11. (original) The method of claim 1 wherein said heat shock protein is a heterologous heat shock protein.

Claim 12. (original) The method of claim 1 wherein said heat shock protein is a homologous heat shock protein.

Claim 13. (original) The method of claim 1 wherein said epitope/heat shock protein complex is formed in vitro.

Claim 14. (original) The method of claim 1 wherein said epitope/heat shock protein complex is formed in vivo.

Claim 15. (original) The method of claim 1 wherein said epitope is a recombinant epitope.

Claim 16. (original) The method of claim 1 wherein said epitope is a synthetic peptide.

Claim 17. (original) The method of claim 16, wherein said synthetic peptide is synthesized by solid phase chemistry.

Claim 18. (original) The method of claim 1 wherein said animal is a ruminant.

Claim 19. (original) The method of claim 18 wherein said ruminant is a Bovidae.

Claim 20. (original) The method of claim 19 wherein said Bovidae is of the genus Bos.

Claim 21. (original) A method for eliciting an immune response to a bovine virus comprising, combining at least one bovine virus allele specific peptide motif containing epitope of at least 8-10 amino acids long and a heat shock protein gp96 to form a

purified epitope/heat shock protein complex, and administering an immune system stimulating amount of said purified epitope-heat shock protein complex to a ruminant.

Claim 22. (withdrawn) A composition comprising, a purified epitope/heat shock protein complex containing at least one bovine virus epitope complexed with at least one heat shock protein, and a pharmaceutically acceptable carrier, diluent or excipient.

Claim 23. (withdrawn) The composition of claim 22, wherein said bovine viral epitope further comprises a supermotif.

Claim 24. (withdrawn) The composition of claim 22, wherein said bovine viral epitope further comprises an allele specific peptide motif.

Claim 25. (withdrawn) The composition of claim 24, wherein said allele specific peptide motif is selected from the group consisting of BoLA-A11, BoLA-A20, BoLA-HD1, BoLA-HD6 and BoLA-HD7.

Claim 26. (withdrawn) The composition claim 22, wherein the bovine viral epitope is between 5 and 25 amino acids in length.

Claim 27. (withdrawn) The composition of claim 22, wherein the bovine viral epitope is between 5 and 15 amino acids in length.

Claim 28. (withdrawn) The composition of claim 22, wherein the bovine viral epitope is between 8 and 10 amino acids in length.

Claim 29. (withdrawn) The composition of claim 22 wherein said epitope is from a virus selected from the group consisting of bovine viral diarrhea virus, bovine respiratory syncytial virus, parainfluenza virus III, bovine corona virus, and bovine rotavirus..

Claim 30. (withdrawn) The composition of claim 22, wherein said heat shock protein is selected from the group consisting of HSP 60, HSP 70 and HSP 90 families.

Claim 31. (withdrawn) The composition of claim 30 wherein said heat shock protein is gp96.

Claim 32. (withdrawn) The composition of claim 22, wherein said heat shock protein is a heterologous heat shock protein.

Claim 33. (withdrawn) The composition of claim 22, wherein said heat shock protein is a homologous heat shock protein.

Claim 34. (withdrawn) The composition of claim 22, wherein said epitope/heat shock protein complex is formed in vitro.

All canceled. Claim 35. (withdrawn) The composition of claim 22 wherein said epitope/heat shock protein complex is formed in vivo.

Claim 36. (withdrawn) The composition of claim 22 wherein said epitope is a recombinant epitope.

Claim 37. (withdrawn) The composition of claim 22 wherein said epitope is a synthetic peptide.

Claim 38. (withdrawn) The composition of claim 37 wherein the synthetic peptide is synthesized by solid phase chemistry.

Claim 39. (withdrawn) A composition comprising, a purified epitope/heat shock protein complex containing:

a gp96 heat shock protein;

at least bovine viral epitope of 8-10 amino acids long, said epitope being from a virus selected from the group consisting of bovine viral diarrhea virus, bovine respiratory syncytial virus, parainfluenza virus III, bovine corona virus, and bovine rota virus; and

a pharmaceutically acceptable carrier, diluent or excipient.